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                 FSTA enhanced with new thesaurus edition
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      3
                 CA/CAplus enhanced with additional kind codes for granted
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      4
                 patents
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
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     5
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                 patent family display formats from INPADOCDB
                 USPATOLD now available on STN
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                 CAS REGISTRY enhanced with additional experimental
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         SEP 07
                 World Patents Index
                 FORIS renamed to SOFIS
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                 INPADOCDB enhanced with monthly SDI frequency
NEWS 11
         SEP 13
                 CA/CAplus enhanced with printed CA page images from
NEWS 12
         SEP 17
                 1967-1998
                 CAplus coverage extended to include traditional medicine
         SEP 17
NEWS 13
                 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
         SEP 24
NEWS 14
                 CA/CAplus enhanced with pre-1907 records from Chemisches
NEWS 15
         OCT 02
                 Zentralblatt
                 BEILSTEIN updated with new compounds
         OCT 19
NEWS 16
                 Derwent Indian patent publication number format enhanced
         NOV 15
NEWS 17
                 WPIX enhanced with XML display format
        NOV 19
NEWS 18
        NOV 30
                 ICSD reloaded with enhancements
NEWS 19
                 LINPADOCDB now available on STN
NEWS 20
        DEC 04
                 BEILSTEIN pricing structure to change
        DEC 14
NEWS 21
                 USPATOLD added to additional database clusters
        DEC 17
NEWS 22
                 IMSDRUGCONF removed from database clusters and STN
NEWS 23
         DEC 17
                 DGENE now includes more than 10 million sequences
NEWS 24
         DEC 17
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        DEC 17
                 TOXCENTER enhanced with 2008 MeSH vocabulary in
                 MEDLINE segment
                 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 26
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                 CA/CAplus enhanced with new custom IPC display formats
NEWS 27
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                 STN Viewer enhanced with full-text patent content
        DEC 17
NEWS 28
                 from USPATOLD
             19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
NEWS EXPRESS
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
              STN Operating Hours Plus Help Desk Availability
NEWS HOURS
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              Welcome Banner and News Items
              For general information regarding STN implementation of IPC 8
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FULL ESTIMATED COST

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http://www.cas.org/infopolicy.html

=> nucleic (w) acid

206347 NUCLEIC

14 NUCLEICS

206350 NUCLEIC

(NUCLEIC OR NUCLEICS)

4501656 ACID

1606641 ACIDS

5007927 ACID

(ACID OR ACIDS)

L1 205273 NUCLEIC (W) ACID

=> HCV

13366 HCV

24 HCVS

L2 13370 HCV

(HCV OR HCVS)

=> L1 and L2

L3 1004 L1 AND L2

=> vector

177472 VECTOR 114886 VECTORS

242586 VECTOR L4

(VECTOR OR VECTORS)

=> plasmid

129629 PLASMID

50609 PLASMIDS

145562 PLASMID L5

(PLASMID OR PLASMIDS)

=> L2 and L4

871 L2 AND L4 L6

=> L2 and L5

689 L2 AND L5 L7

=> NS5b and L7

924 NS5B

52 NS5B AND L7 L8

=> Ns3 and L8

2859 NS3

L9 31 NS3 AND L8

=> NS4 and L9

727 NS4

L10 8 NS4 AND L9

=> NS5b and L6

924 NS5B

L1174 NS5B AND L6

=> NS3 and L11

2859 NS3

46 NS3 AND L11 L12

=> NS4 and L12

727 NS4

L13 10 NS4 AND L12

=> D L10 IBIB ABS 1-8

L10 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2007:1334675 CAPLUS

TITLE:

Compositions comprising the hepatitis C virus (

HCV) polyprotein NS3/NS4

and protein NS5b, recombinant expression and sequences thereof, and vaccine uses

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

Inchauspe, Genevieve; Fournillier, Anne Transgene S.A., Fr. U.S. Pat. Appl. Publ., 75pp., Cont.-in-part of U.S. Ser. No. 559,431.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007269460	A1	20071122	US 2007-723638	20070321
FR 2855758	A1	20041210	FR 2003-6772	20030605
FR 2855758	B1	20050722		
WO 2004111082	A2	20041223	WO 2004-FR50214	20040604
WO 2004111082	A3	20050217		

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                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
                LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
               NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
                TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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                SN, TD, TG
                                       20060622
                                                      US 2005-559431
                                                                                  20051205
      US 2006134065
                                A1
                                                      FR 2003-6772
                                                                               A 20030605
PRIORITY APPLN. INFO.:
                                                      WO 2004-FR50214
                                                                               W 20040604
                                                      US 2005-559431
                                                                               A2 20051205 ·
      The invention provides a compound containing a polyprotein NS3/
AB
      NS4 and a polypeptide NS5b of hepatitis C virus (
      HCV), which has an immunogenic and protective power superior to
      that obtained with a vaccine addnl. including the protein NS5a and/or
      other structural proteins of HCV. Said invention also relates
      to expression vectors, such as adenovirus and poxvirus vectors, encoding
      the polyprotein NS3/NS4 and the polypeptide
      NS5b. The inventive compound can be used for a therapeutic
      application.
L10 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
                               2006:333454 CAPLUS
ACCESSION NUMBER:
                               144:357638
DOCUMENT NUMBER:
                               Application of a transgenic mouse model of hepatitis c
TITLE:
                               virus (HCV) infection and identification of
                               antiviral agent for HCV therapeutics
                               Sallberg, Matti; Frelin, Lars
INVENTOR(S):
                               Tripep AB, Swed.
PATENT ASSIGNEE(S):
                               PCT Int. Appl., 165 pp.
SOURCE:
                               CODEN: PIXXD2
DOCUMENT TYPE:
                               Patent
LANGUAGE:
                               English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
                                       DATE
                                                      APPLICATION NO.
      PATENT NO.
                               KIND
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                                       _____
                                                      WO 2005-IB3736
                                                                                   20050826
                               A2
                                        20060302
      WO 2006021896
                                       20060817
      WO 2006021896
                               Α3
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20050826

20060203

KG, KZ, MD, RU, TJ, TM

A2

. A2

A3

EP 1781690

WO 2006109196

WO 2006109196

20070509

20061019

20070315

EP 2005-810181

WO 2006-IB1668

AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

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                KG, KZ, MD, RU, TJ, TM
                                                       US 2004-605030P
PRIORITY APPLN. INFO.:
                                                       US 2005-649975P
                                                                                P 20050204
                                                                                    20050826
                                                       WO 2005-IB3736
                                                       US 2005-740362P
                                                                                 P
                                                                                    20051128
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Disclosed herein is the discovery of novel NS3/4A compns. with enhanced expression abilities. Embodiments of the invention include codon optimized NS3/4A compns. and compns. with the Semliki forest virus replicon. Addnl. embodiments include transgenic organisms containing these NS3/4A compns., methods of using these transgenic mice to screen and refine drugs, and the drugs refined by these methods. Addnl. embodiments include protease activity dependent mols. that can indicate the presence or absence of a protease inhibitor.

L10 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2005:303181 CAPLUS

DOCUMENT NUMBER:

142:372468

TITLE:

HCV fusion proteins with modified

NS3 domains and uses thereof as immunogens

Houghton, Michael

INVENTOR(S):
PATENT ASSIGNEE(S):

USA

SOURCE:

U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S.

Ser. No. 721,479. CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005074465 US 6986892 US 2006057164 JP 2006265267 PRIORITY APPLN. INFO.:	A1 B1 A1 A	20050407 20060117 20060316 20061005	US 2003-612884 US 2000-721479 US 2005-195009 JP 2006-174595 US 1999-167502P US 2000-721479 US 2002-393694P US 2002-394510P JP 2004-519849	P P	20030702 20001122 20050802 20060623 19991124 20001122 20020702 20020708 20030702

The disclosed invention provides hepatitis C virus (HCV) fusion proteins that include a mutated NS3 protease domain, fused to at least one other HCV epitope derived from another region of the HCV polyprotein. The fusions can be used in stimulation of a cellular immune response to HCV, such as activating hepatitis C virus (HCV)-specific T cells, including CD4+ and CD8+ T cells. The method can be used in model systems to develop HCV-specific immunogenic compns., as well as to immunize a mammal against HCV . In expts. with Rhesus macaques, the immunization with plasmid DNA encoding an NS3 (modified) NS4NS5aCore fusion protein led to activation of HCV-specific CD8-pos. T cells expressing interferon γ and proliferation of HCV-specific CD4-pos. T cells. Also presented is the use of alphavirus replicon particles.

L10 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2004:392569 CAPLUS

DOCUMENT NUMBER: 140:390291

Activation of HCV-specific T cells using TITLE:

fusion protein vaccines comprising HCV

NS3, NS4, NS5a, and NS5b

polypeptides

Houghton, Michael; Coates, Steve; Selby, Mark; INVENTOR(S):

Paliard, Xavier

PATENT ASSIGNEE(S):

Chiron Corporation, USA PCT Int. Appl., 136 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE
WO 2004039950 WO 2004039950		WO 2003-US33610	20031024
W: AE, AG, AL,	AM, AT, AU, AZ,	BA, BB, BG, BR, BY,	BZ, CA, CH, CN,
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LR, LS, LT,	LU, LV, MA, MD,	MG, MK, MN, MW, MX,	MZ, NI, NO, NZ,
OM, PG, PH,	PL, PT, RO, RU,	SC, SD, SE, SG, SK,	SL, SY, TJ, TM,
TN, TR, TT,	TZ, UA, UG, US,	UZ, VC, VN, YU, ZA,	ZM, ZW
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		LU, MC, NL, PT, RO,	
BF, BJ, CF,	CG, CI, CM, GA,	GN, GQ, GW, ML, MR,	NE, SN, TD, TG,
AP, EA, EP,			
CA 2505611		CA 2003-2505611	
AU 2003287188		AU 2003-287188	
EP 1576125		EP 2003-781368	
R: AT, BE, CH,	DE, DK, ES, FR,	GB, GR, IT, LI, LU,	NL, SE, MC, PT,
IE, SI, LT,	LV, FI, RO, MK,	CY, AL, TR, BG, CZ,	EE, HU, SK
PRIORITY APPLN. INFO.:		US 2002-281341	A 20021025
		WO 2003-US33610	
		activating hepatitis	C virus (
HCV)-specific T cel	ls, including CD	4+ and CD8+ T cells.	

HCV)-specific T cells, including CD4+ HCV-specific T cells are activated using fusion protein vaccines comprising HCV NS3, NS4, NS5a, and NS5b polypeptides, polynucleotides encoding such fusion proteins, or polypeptide or polynucleotide compns. containing the individual components of these fusions. The method can be used in model systems to develop HCV-specific immunogenic compns., as well as to immunize a mammal against HCV.

L10 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:908392 CAPLUS

DOCUMENT NUMBER: 138:13314

Comparative vaccine studies in HLA-A2.1-transgenic TITLE:

> mice reveal a clustered organization of epitopes presented in hepatitis C virus natural infection

Himoudi, Nourredine; Abraham, Jean-Daniel; AUTHOR(S):

Fournillier, Anne; Lone, Yu Chun; Joubert, Aurelie; Op De Beeck, Anne; Freida, Delphinc; Lemonnier, Francois;

Kieny, Marie Paule; Inchauspe, Genevieve

Unite Mixte CNRS-BioMerieux, UMR 2142, Ecole Normale CORPORATE SOURCE:

Superieure, Lyon, 69364, Fr.

Journal of Virology (2002), 76(24), 12735-12746 CODEN: JOVIAM; ISSN: 0022-538X SOURCE:

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

English LANGUAGE:

AB A polyepitopic CD8+-T-cell response is thought to be critical for control of hepatitis C virus (HCV) infection. Using transgenic mice, we analyzed the immunogenicity and dominance of most known HLA-A2.1 epitopes presented during infection by using vaccines that carry the potential to enter clin. trials: peptides, DNA, and recombinant adenoviruses. The vaccines capacity to induce specific cytotoxic T lymphocytes and interferon gamma-producing cells revealed that immunogenic epitopes are clustered in specific antigens. For two key antigens, flanking regions were shown to greatly enhance the scope of epitope recognition, whereas a DNA-adenovirus prime-boost vaccination strategy augmented epitope immunogenicity, even that of subdominant ones. The present study reveals a clustered organization of HCV immunogenic HLA.A2.1 epitopes and strategies to modulate their dominance.

REFERENCE COUNT: 51

51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2002:716438 CAPLUS

DOCUMENT NUMBER:

137:227663

TITLE:

Hepatitis C virus (HCV) cDNA-based

hepatocyte cell culture system for synthesis of

infectious HCV, and uses for antiviral

screening

INVENTOR(S):

Dasgupta, Asim; Koka, Prasad S.

PATENT ASSIGNEE(S): The Regents

SOURCE:

The Regents of the University of California, USA PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT	ENT I	NO.					DATE				ICAT:				D	ATE	
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US	7183 1421	095			B2		2007	0227			002-				,	0020	311
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CN	JP 2004537279 T 2004 CN 1592794 A 2005					2004 2005	1216 0309		CN 2	002-	8062	37		2	0020	311	
PRIORITY	RIORITY APPLN. INFO.:										001- 002-			1		0020	

AB The present invention presents a method of synthesizing infectious hepatitis C virus (HCV) by transfecting hepatocyte cells with a gene encoding HCV and then exposing uninfected cells to the HCV to form addnl. HCV. The invention relates to a HCV cDNA-based culture system capable of synthesis of infectious HCV in cell culture and cell-to-cell spread of the virus. The expression of T7 RNA polymerase in the cytoplasm was used to transcribe

the HCV cDNA under the T7 promoter to generate high quantities of HCV RNA. The viral RNA proved to be translated to produce viral structural (core, El, E2 and p7) and nonstructural (NS2, NS3, NS4A and B, NS5A and B) proteins. Viral RNA replication directed by the RNA-dependent RNA polymerase (NS5B) would then occur. Progeny virions were made and secreted into the tissue culture media, and infection of neighboring cells resulting in cell-to-cell spread of virus was demonstrated. The invention also relates to a method of measuring the level of HCV infection in a hepatocyte cell. A method for identifying a modulator of HCV activity is also presented, and a method for modulating HCV activity. The invention provides a reliable system for both genetic anal. of the viral genome and for the development of novel antiviral strategies.

L10 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

PATENT ASSIGNEE(S):

2001:319922 CAPLUS

DOCUMENT NUMBER:

134:325205

TITLE:

Activation of HCV-specific T cells using

hepatitis C virus nonstructural proteins, either alone

or as fusions

INVENTOR(S):

Paliard, Xavier; Houghton, Michael; Selby, Mark

Chiron Corp., USA

SOURCE:

PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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AB The invention provides a method of activating hepatitis C virus (
HCV) - specific T cells, including CD4+ and CD8+ T cells.
HCV-specific T cells are activated using fusion proteins
comprising HCV NS3, NS4, NS5a, and
NS5b polypeptides, polynucleotides encoding such fusion proteins,
or polypeptide or polynucleotide compns. containing the individual components
of these fusions. The method can be used in model systems to develop

HCV-specific immunogenic compns., as well as to immunize a mammal against HCV.

L10 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:113845 CAPLUS

DOCUMENT NUMBER: 130:163166

TITLE: Test vectors containing hepatitis C or human

cytomegalovirus nucleic acid and indicator gene and methods for determining antiviral susceptibility and

resistance and for antiviral screening

INVENTOR(S): Capon, Daniel J.; Whitcomb, Jeannette M.; Parkin, Neil

Т.

PATENT ASSIGNEE(S): Virologic, Inc., USA

SOURCE: PCT Int. Appl., 128 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PAT	CENT :	NO.			KIN)	DATE		;	APPL	ICAT:	ION 1	NO.		D	ATE	
WO:	9906	 597			A1	-	1999	0211	1	WO 1	998-1	US15:	967		1:	9980	730
	W:	AL,	AM,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,	DE,
		DK,	EE,	ES,	FI,	GB,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IS,	JΡ,	KΕ,	KG,
		ΚP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MK,	MN,	MW,	MX,
		NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,	TM,	TR,	TT,
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	RW:	GH,	GM,	KE,	LS,	MW,	SD,	SZ,	ŬĠ,	ZW,	ΑT,	BE,	CH,	CY,	DE,	DK,	ES,
		FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,	CG,	CI,
		CM,					MR,										
	2298						1999										
AU	9888	976			Α		1999	0222		AU 1	998-	8897	6		1	9980	730
EP	1012	334			A1		2000	0628		EP 1	998-	9407	79		1	9980	730
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
		ΙE,	FI														
JP	JP 2001512036				T		2001	0821		JP 2	000-	5053	36		1	9980	730
PRIORITY	PRIORITY APPLN. INFO.:								•	US 1	997-	9035	07		A 1	9970	730
									,	WO 1	998-1	US15	967	1	W 1	9980	730

This invention provides a method for determining susceptibility for an AB HCV or HCMV anti-viral drug comprising: (a) introducing a resistance test vector comprising a patient-derived segment and an indicator gene into a host cell; (b) culturing the host cell from (a); (c) measuring expression of the indicator gene in a target host cell, and (d) comparing the expression of the indicator gene from (c) with the expression of the indicator gene measured when steps (a-c) are carried out in the absence of the anti-viral drug, wherein a test concentration of the anti-viral drug is present at steps (a-c); at steps (b-c); or at step (c). This invention also provides a method for determining HCV or HCMV anti-viral drug resistance in a patient comprising: (a) determining anti-viral drug susceptibility in the patient at a first time using the susceptibility test described above, wherein the patient-derived segment is obtained from the patient at about said time; (b) determining anti-viral drug

susceptibility of the same patient at a later time; and (c) comparing the anti-viral drug susceptibilities determined in step (a) and (b), wherein a decrease in anti-viral drug susceptibility at the later time compared to the first time indicates development or progression of anti-viral drug resistance in the patient. This invention also provides a method for evaluating the biol. effectiveness of a candidate HCV or HCMV anti-viral drug compound Compns. including resistance test vectors comprising a patient-derived segment comprising an HCV or HCMV gene and an indicator gene and host cells transformed with the resistance test vectors are provided.

=> D L13 IBIB ABS 1-13

L13 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2007:1334675 CAPLUS

TITLE:

Compositions comprising the hepatitis C virus (

HCV) polyprotein NS3/NS4

and protein NS5b, recombinant expression and

sequences thereof, and vaccine uses

INVENTOR(S):

Inchauspe, Genevieve; Fournillier, Anne

PATENT ASSIGNEE(S):

Transgene S.A., Fr.

SOURCE:

U.S. Pat. Appl. Publ., 75pp., Cont.-in-part of U.S.

Ser. No. 559,431.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PA	PATENT NO.						DATE		;	APPL	ICAT.	ION I	. 00			ATE	
FR	2007	758			A1		2007 2004	1210							2	0070: 0030:	321
WO	2855	1110	82		A2		2005	1223	1	WO 2	004-	FR50	214		2	0040	604
***	WO 2004111082 W: AE, AG, AL, CN, CO, CR, GE, GH, GM, LK, LR, LS, NO, NZ, OM, TJ, TM, TN, RW: BW, GH, GM, AZ, BY, KG, EE, ES, FI, SI, SK, TR				AM, CU, HR, LT, PG, TR, KE, KZ, FR,	AT, CZ, HU, LU, PH, TT, LS, MD, GB,	AU, DE, ID, LV, PL, TZ, MW, RU, GR,	AZ, DK, IL, MA, PT, UA, MZ, TJ,	DM, IN, MD, RO, UG, NA, TM, IE,	DZ, IS, MG, RU, US, SD, AT, IT,	EC, JP, MK, SC, UZ, SL, BE, LU,	EE, KE, MN, SD, VC, SZ, BG, MC,	EG, KG, MW, SE, VN, TZ, CH, NL,	ES, KP, MX, SG, YU, UG, CY, PL,	FI, KR, MZ, SK, ZA, ZM, CZ, PT,	GB, KZ, NA, SL, ZM, ZW, DE, RO,	GD, LC, NI, SY, ZW AM, DK, SE,
	SN, TD, TG US 2006134065 PRIORITY APPLN. INFO.:				Al		2006	0622	1	FR 2 WO 2	003- 004-	6772 FR50:	214	,	A 2 W 2	0051: 0030: 0040: 0051:	605 604

The invention provides a compound containing a polyprotein NS3/ NS4 and a polypeptide NS5b of hepatitis C virus (HCV), which has an immunogenic and protective power superior to that obtained with a vaccine addnl. including the protein NS5a and/or other structural proteins of HCV. Said invention also relates to expression vectors, such as adenovirus and poxvirus vectors, encoding the polyprotein NS3/NS4 and the polypeptide NS5b. The inventive compound can be used for a therapeutic application.

L13 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2006:492228 CAPLUS

DOCUMENT NUMBER:

144:487147

TITLE:

Yeast-based therapeutic vaccine vehicle for chronic

hepatitis c infection

INVENTOR (S):

Duke, Richard C.; Franzusoff, Alex; Haller, Aurelia;

King, Thomas H.

PATENT ASSIGNEE(S):

Globeimmune, Inc., USA

SOURCE:

U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S.

Ser. No. 738,646.

CODEN: USXXCO

DOCUMENT TYPE:

Patent English

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006110755	A1	20060525	US 2005-254252	20051018
US 2004156858	A1	20040812	US 2003-738646	20031216
PRIORITY APPLN. INFO.:			US 2002-434163P P	20021216
FRIORITI MITEM. INTO.			US 2003-738646 A	2 20031216
-			US 2004-620158P P	20041018

MARPAT 144:487147 OTHER SOURCE(S):

The present invention relates to compns., including vaccines, and methods for vaccinating an animal against hepatitis C virus (HCV) and for treating or preventing hepatitis C viral infection in an animal. invention includes a variety of novel HCV fusion proteins that can be used directly as a vaccine or in conjunction with a yeast-based vaccine vehicle to elicit an immune response against HCV in an animal. The invention also includes the use of the HCV fusion gene and protein described herein in any diagnostic or therapeutic protocol for the detection and/or treatment or prevention of HCV infection.

L13 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2006:333454 CAPLUS

DOCUMENT NUMBER: TITLE:

144:357638 Application of a transgenic mouse model of hepatitis c

virus (HCV) infection and identification of

antiviral agent for HCV therapeutics

INVENTOR(S):

Sallberg, Matti; Frelin, Lars

PATENT ASSIGNEE(S):

SOURCE:

Tripep AB, Swed.

PCT Int. Appl., 165 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE:

Patent

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	ENT 1				KINI)	DATE		7	APPL	CAT	ION 1	10.		DA	ATE	<u> </u>
	2006		96				20060		V	10 20	005-	IB373	36		20	0508	326
WO	2006	02189	96		A3		20060)8T.				22	DLI	DV	DØ	CΛ	CH
	W:	ΑE,	AG,	ΑL,	ΑM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BI,	BZ,	CA,	CD,
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KΡ,	KR,	KZ,
		T.C	T.K.	TIR.	LS.	LT.	LU.	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MΖ,	NΑ,
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		TS.	TT.	LT.	LU.	LV.	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ъυ,
		CF,	CG.	CT.	CM.	GA.	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG,	BW,	GH,
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					RU,				•								
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	к:	TC,	TT.	T.T	T.T	T.II	LV,	MC.	NI.	PL.	PT.	RO,	SE,	SI,	SK,	TR	
T-T-O	2006	1001	ος 11,	шт,	77.	шо,	2006	1019		WO 2	006-	IB16	68	-	2	0060	203
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WO	2006	TOST	70	73. T	NM	א ידי	AU,	72	pΔ	BB	BG.	BR.	BW.	BY.	BZ,	CA,	CH,
	w:	AE,	AG,	AL,	AIM,	AI,	AU,	הט,	DM,	D2,	EC,	EE.	EG.	ES.	FI.	GB.	GD,
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	TC,	TD.	KE,	KG,	KM.	KN.	KP.	KR.
		GE,	GH,	GM,	HK,	ΗU,	ID,	ть,	TIN,	TO,	UF,	1447	100,	141,	141,	/	,

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KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
            MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
            SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
            VN, YU, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
            GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:
                                           US 2004-605030P
                                                               P 20040827
                                           US 2005-649975P
                                                              P 20050204
                                            WO 2005-IB3736
                                                               W 20050826
                                           US 2005-740362P
                                                              P 20051128
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Disclosed herein is the discovery of novel NS3/4A compns. with AB enhanced expression abilities. Embodiments of the invention include codon optimized NS3/4A compns. and compns. with the Semliki forest virus replicon. Addnl. embodiments include transgenic organisms containing these NS3/4A compns., methods of using these transgenic mice to screen and refine drugs, and the drugs refined by these methods. Addnl. embodiments include protease activity dependent mols. that can indicate the presence or absence of a protease inhibitor.

L13 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2005:303181 CAPLUS

DOCUMENT NUMBER:

142:372468

TITLE:

HCV fusion proteins with modified

NS3 domains and uses thereof as immunogens

INVENTOR(S):

Houghton, Michael

PATENT ASSIGNEE(S):

USA

SOURCE:

U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S.

Ser. No. 721,479.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DAT	E
					
US 2005074465	A1	20050407	US 2003-612884	200	30702
US 6986892	B1	20060117	US 2000-721479	200	01122
US 2006057164	A1	20060316	US 2005-195009	200	50802
JP 2006265267	Α	20061005	JP 2006-174595	200	60623
PRIORITY APPLN. INFO.:			US 1999-167502P	199	91124
			US 2000-721479	2 200	01122
			US 2002-393694P	200	20702
			US 2002-394510P	200	20708
			JP 2004-519849	3 200	30702

The disclosed invention provides hepatitis C virus (HCV) fusion AB proteins that include a mutated NS3 protease domain, fused to at least one other HCV epitope derived from another region of the HCV polyprotein. The fusions can be used in stimulation of a cellular immune response to HCV, such as activating hepatitis C virus (HCV)-specific T cells, including CD4+ and CD8+ T cells. The method can be used in model systems to develop HCV-specific immunogenic compns., as well as to immunize a mammal against HCV In expts. with Rhesus macaques, the immunization with plasmid DNA encoding an NS3 (modified) NS4NS5aCore fusion protein led to activation of HCV-specific CD8-pos. T cells expressing interferon γ and proliferation of HCV-specific CD4-pos. T cells. Also presented is the use of alphavirus replicon particles.

L13 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2004:905910 CAPLUS

DOCUMENT NUMBER:

141:378844

TITLE:

Inducing a T cell response with recombinant

antigen-expressing pestivirus replicons or recombinant pestivirus replicon-transfected dendritic cells, and

therapeutic uses

INVENTOR(S):

Rehermann, Barbara; Racanelli, Vito; Behrens,

Sven-Erik; Tautz, Norbert

PATENT ASSIGNEE(S):

The Government of the United States of America as Represented by the Secretary of Health and Human Services, USA; Justus-Liebig-Universitaet Giessen

PCT Int. Appl., 143 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	ENT 1	. 01			KIN)]	DATE		Ž	APPL	CAT	ION' I	10.		DA	ATE	
	2004(2004(A2 A3		2004: 2005:		7	WO 20	004-0	JS110	18		20	0404	110
WO	W:	AE, CN, GE, LK, NO, TJ, BW, BY,	AG, CO, GH, LR, NZ, TM, GH, KG,	AL, CR, GM, LS, OM, TN, GM, KZ,	AM, CU, HR, LT, PG, TR, KE, MD, GB,	AT, CZ, HU, LU, PH, TT, LS, RU, GR,	AU, DE, ID, LV, PL, TZ, MW, TJ,	AZ, DK, IL, MA, PT, UA, MZ, TM, IE,	DM, IN, MD, RO, UG, SD, AT, IT,	DZ, IS, MG, RU, US, SL, BE, LU,	EC, JP, MK, SC, UZ, SZ, BG, MC,	EE, KE, MN, SD, VC, TZ, CH, NL,	EG, KG, MW, SE, VN, UG, CY, PL,	ES, KP, MX, SG, YU, ZM, CZ, PT,	BZ, FI, KR, MZ, SK, ZA, ZW, DE, RO, MR,	GB, KZ, NA, SL, ZM, AM, DK, SE,	CD, LC, NI, SY, ZW AZ, EE, SI,
PRIORITY	APP	TD,	TG		,		,	ŕ		US 2	003-	4621	65P	,	P 2	0030 0030	411

The present disclosure relates to compds. and methods of generating T AΒ cell-mediated immunity, particularly T cell-mediated immunity to Hepatitis C Virus (HCV), Respiratory Syncytial Virus (RSV), Human Immunodeficiency Virus (HIV), Mycobacterium tuberculosis, Plasmodium falciparum, and tumors. The method includes (a) administering to the subject an amount of an antigen presenting cell (such as dendritic cell) sufficient to induce the response in the subject, wherein the antigen presenting cell expresses the recombinant antigen from a pestivirus replicon or (b) directly administering the recombinant antigen expressing replicon in form of RNA or DNA.

L13 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

2002:908392 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER:

138:13314

TITLE:

Comparative vaccine studies in HLA-A2.1-transgenic mice reveal a clustered organization of epitopes presented in hepatitis C virus natural infection

AUTHOR (S):

Himoudi, Nourredine; Abraham, Jean-Daniel; Fournillier, Anne; Lone, Yu Chun; Joubert, Aurelie; Op De Beeck, Anne; Freida, Delphinc; Lemonnier, Francois;

Kieny, Marie Paule; Inchauspe, Genevieve

CORPORATE SOURCE:

Unite Mixte CNRS-BioMerieux, UMR 2142, Ecole Normale

Superieure, Lyon, 69364, Fr.

SOURCE:

Journal of Virology (2002), 76(24), 12735-12746

CODEN: JOVIAM; ISSN: 0022-538X American Society for Microbiology

PUBLISHER:

Journal

DOCUMENT TYPE: English LANGUAGE:

A polyepitopic CD8+-T-cell response is thought to be critical for control of hepatitis C virus (HCV) infection. Using transgenic mice, we

analyzed the immunogenicity and dominance of most known HLA-A2.1 epitopes presented during infection by using vaccines that carry the potential to enter clin. trials: peptides, DNA, and recombinant adenoviruses. The vaccines capacity to induce specific cytotoxic T lymphocytes and interferon gamma-producing cells revealed that immunogenic epitopes are clustered in specific antigens. For two key antigens, flanking regions were shown to greatly enhance the scope of epitope recognition, whereas a DNA-adenovirus prime-boost vaccination strategy augmented epitope immunogenicity, even that of subdominant ones. The present study reveals a clustered organization of HCV immunogenic HLA.A2.1 epitopes and strategies to modulate their dominance.

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:716438 CAPLUS

DOCUMENT NUMBER: 137:227663

TITLE: Hepatitis C virus (HCV) cDNA-based

hepatocyte cell culture system for synthesis of

infectious HCV, and uses for antiviral

screening

INVENTOR(S): Dasgupta, Asim; Koka, Prasad S.

PATENT ASSIGNEE(S): The Regents of the University of California, USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

		CENT										ICAT:					ATE	
		2002									WO 2	002-1	US75	16		2	0020	311
		2002																
		W:	AE.	AG.	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,
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		2002															0020	311
		7183																
		1421									EP 2	002-	7234	09		2	0020	311
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	JР	2004	5372	79	,	T	,	2004	1216	,	JP 2	002-	5718	32		2	0020	311
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AB The present invention presents a method of synthesizing infectious hepatitis C virus (HCV) by transfecting hepatocyte cells with a gene encoding HCV and then exposing uninfected cells to the HCV to form addnl. HCV. The invention relates to a HCV cDNA-based culture system capable of synthesis of infectious HCV in cell culture and cell-to-cell spread of the virus. The expression of T7 RNA polymerase in the cytoplasm was used to transcribe the HCV cDNA under the T7 promoter to generate high quantities of HCV RNA. The viral RNA proved to be translated to produce

viral structural (core, El, E2 and p7) and nonstructural (NS2, NS3, NS4A and B, NS5A and B) proteins. Viral RNA replication directed by the RNA-dependent RNA polymerase (NS5B) would then occur. Progeny virions were made and secreted into the tissue culture media, and infection of neighboring cells resulting in cell-to-cell spread of virus was demonstrated. The invention also relates to a method of measuring the level of HCV infection in a hepatocyte cell. A method for identifying a modulator of HCV activity is also presented, and a method for modulating HCV activity. The invention provides a reliable system for both genetic anal. of the viral genome and for the development of novel antiviral strategies.

L13 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1999:113845 CAPLUS

DOCUMENT NUMBER:

130:163166

TITLE:

Test vectors containing hepatitis C or human

cytomegalovirus nucleic acid and indicator gene and methods for determining antiviral susceptibility and

resistance and for antiviral screening

INVENTOR(S):

Capon, Daniel J.; Whitcomb, Jeannette M.; Parkin, Neil

Т.

PATENT ASSIGNEE(S):

Virologic, Inc., USA PCT Int. Appl., 128 pp.

SOURCE: PCT Int. Appl CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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APPLICATION NO.
                            KIND
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     PATENT NO.
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                             A1 19990211 WO 1998-US15967 19980730
     WO 9906597
          W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
          UA, UG, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
              FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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              AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, FI
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      JP 2001512036
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PRIORITY APPLN. INFO.:
                                                    US 1997-903507
                                                    WO 1998-US15967 W 19980730
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This invention provides a method for determining susceptibility for an HCV or HCMV anti-viral drug comprising: (a) introducing a resistance test vector comprising a patient-derived segment and an indicator gene into a host cell; (b) culturing the host cell from (a); (c) measuring expression of the indicator gene in a target host cell, and (d) comparing the expression of the indicator gene from (c) with the expression of the indicator gene measured when steps (a-c) are carried out in the absence of the anti-viral drug, wherein a test concentration of the anti-viral drug is present at steps (a-c); at steps (b-c); or at step (c). This invention also provides a method for determining HCV or HCMV anti-viral drug resistance in a patient comprising: (a) determining anti-viral drug susceptibility in the patient at a first time using the susceptibility test described above, wherein the patient-derived segment is obtained from the patient at about said time; (b) determining anti-viral

drug

susceptibility of the same patient at a later time; and (c) comparing the

anti-viral drug susceptibilities determined in step (a) and (b), wherein a decrease in anti-viral drug susceptibility at the later time compared to the first time indicates development or progression of anti-viral drug resistance in the patient. This invention also provides a method for evaluating the biol. effectiveness of a candidate HCV or HCMV anti-viral drug compound Compns. including resistance test vectors comprising a patient-derived segment comprising an HCV or HCMV gene and an indicator gene and host cells transformed with the resistance test vectors are provided.

REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

1

ACCESSION NUMBER:

1998:251284 CAPLUS

DOCUMENT NUMBER:

128:292153

TITLE:

Protease regulator screening assay using a recombinant polypeptide comprising anchor, protease recognition,

and signal regions

INVENTOR(S):

Chien, David Y.; Selby, Mark J.

PATENT ASSIGNEE(S):

Chiron Corporation, USA

SOURCE:

PCT Int. Appl., 41 pp.

DOCUMENT TYPE:

CODEN: PIXXD2 Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

APPLICATION NO. DATE PATENT NO. KIND DATE -----______ - **- -** -_____ A1 19980423 WO 1997-US18632 WO 9816657 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG AU 1997-49043 19971017 19980511 AU 9749043 Α 19971017 US 1997-997055 20020820 US 6436666 Bl 20020820 US 2002-225390 · US 2003113825 A1 20030619 B2 20050802 US 6924122 US 2005-193615 20050801 US 2006292659 A1 20061228 US 1996-28817P P 19961017 PRIORITY APPLN. INFO.: US 1997-997055 A1 19971017 W 19971017 WO 1997-US18632 A3 20020820 US 2002-225390

A polypeptide containing an anchor region, a protease recognition site, and a AB detectable signal region can be produced recombinantly and directly attached to a solid support. The polypeptide is useful for screening protease regulators, especially protease inhibitors. Thus, a recombinant protein is produced in which the anchor region is protein A which specifically binds to an antibody, the protease recognition site is that for hepatitis C virus NS3 protease such as that for NS4A/NS4B or HS4B/NS5A cleavage, and the signal region comprises the epitope FLAG sequence. A fragment encoding HCV NS5 peptide protease target site is inserted in frame into the polylinker region of pEZZ18 so that it is connected at the C-terminal region of protein A. The NS5 peptide protease target site includes the NS5A and NS5B cleavage site, i.e., amino acids 2420 and 2421, 7 amino acids at the N-terminal side of the cleavage site, and 8 amino acids at the C-terminal side of the cleavage site. Another sequence fragment encoding the FLAG tag is inserted in frame at the C-terminal end of the NS5 protease target site. The sequence fragment encodes three FLAG tags alternately spaced with two

4-glycine spacers. The assay is readily adapted to an automated format and is suitable for large scale drug screens, as demonstrated by screening for potentially therapeutically useful inhibitors of the HCV protease.

REFERENCE COUNT:

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS 8 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1997:228414 CAPLUS

DOCUMENT NUMBER:

126:247257

TITLE:

Hepatitis C virus (HCV) RNA polymerase assay

using cloned HCV non-structural proteins

Bartholomeusz, Angeline I.; Guo, Ke-Jian; Edwards, AUTHOR (S): Patrick C.; Locarnini, Stephen A.

Victorian Infectious Diseases Reference Laboratory, CORPORATE SOURCE:

Victoria, 3078, Australia

SOURCE:

Antiviral Therapy (1996), 1(Suppl. 4, Therapies for

Viral Hepatitis), 18-24 CODEN: ANTHFA; ISSN: 1359-6535

International Medical Press

PUBLISHER: DOCUMENT TYPE:

Journal

LANGUAGE:

English

Investigations into the RNA replication of hepatitis C virus (HCV) have been hampered by the lack of a cell-culture system. The objective of this study was to develop an in vitro system to study HCV polymerase activity and RNA replication. We are currently developing two HCV RNA replication assays. The first reconstitutes the various components required for RNA synthesis: cloned viral non-structural proteins as the source of the viral polymerase and helicase, exts. from uninfected Vero (African green monkey kidney) or HepG2 (human hepatoma) cells as the source of host factors and an RNA template (either HCV RNA transcripts or RNA from the pestivirus bovine viral diarrhea virus). The second assay uses HCV-infected liver cell exts. and thus contains authentic replication complexes consisting of viral and host proteins and RNA templates. In both assays, synthesis of viral RNA is detected by the incorporation of the radiolabel [α -32P]GTP. In the assay using cloned viral protein, the genes encoding NS2, NS3, NS4, NS5A and NS5B from pBRTM/HCV 1-3011 were cloned into the transcription vector pT7T3. The transcribed RNA was translated with rabbit reticulocytes in the presence of canine pancreatic membranes. Radiolabeled RNA was detected only in polymerase assays that contained the translated proteins and all other components. In assays using infected liver cell exts., radiolabel was incorporated into RNA products that were not present in control assays using uninfected liver cell exts. Both assays will be useful in the elucidation of processes involved in HCV RNA replication and in the development of antiviral agents.

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